Exploring The Integration of AI Tools in HR Practices: A Case Study of MIHAN-Based IT Companies in Nagpur

Dipak Bhivgade[1], Dr. Rajiv Khaire[2]

[1]Phd Scholar, Dept. of Management, Ramdeobaba University, Nagpur, Maharashtra, India

[2]Associate professor, Dept. of Management, Ramdeobaba University, Nagpur, Maharashtra, India

Email ID: dipakbhivgade@gmail.com[1], khairerb@rknec.edu[2]

Abstract

The evolution of Artificial Intelligence (AI) is significantly transforming Human Resource Management (HRM), especially within the IT industry. This research explores how AI technologies are being integrated into HR operations by IT companies based in the MIHAN (Multi-modal International Cargo Hub and Airport at Nagpur) region. Utilizing a case study methodology, the study involved telephonic interviews with HR representatives from 20 different firms. The results revealed that 9 out of the 20 companies have incorporated AI-driven tools—such as chatbots, digital assistants, and data analytics platforms—into their HR processes. These organizations reported noticeable improvements in operational efficiency, a reduction in manual workloads, and a more positive employee experience. Conversely, 11 companies had not adopted AI technologies, citing challenges such as high implementation costs, limited knowledge about AI solutions, and a continued preference for conventional HR practices. The findings offer valuable direction for HR managers, technology vendors, and policymakers, emphasizing the potential of AI to transform HR functions and urging more widespread adoption within the region's IT sector.

Keywords: AI in HR, HR Automation, MIHAN IT, Digital HR, HR Tools Adoption

1. Introduction

Artificial Intelligence (AI) is fundamentally changing organizational operations, with Human Resource Management (HRM) emerging as a key area of transformation [1]. Modern HR departments are increasingly leveraging AI to enhance core functions such as recruitment, employee engagement, performance evaluation, and routine administrative tasks. This technological shift enables more streamlined, data-driven, and scalable HR systems. Within this evolving landscape, the present study investigates how AI is being adopted in HRM across IT firms situated in MIHAN (Multi-modal International Cargo Hub and Airport at Nagpur), a rapidly growing industrial and technology zone in Central India. As MIHAN establishes itself as a notable IT destination—hosting a combination of multinational corporations, medium-scale enterprises, and emerging startups—it provides a unique environment for studying the digital evolution of HR practices [2]. The increasing emphasis on digital transformation makes AI integration not only a technological upgrade but also a strategic necessity for organizations aiming to improve operational efficiency, reduce repetitive tasks, and enhance workforce-related decision-making. This research adopts a case study approach, involving telephonic interviews with HR managers from 20 IT firms operating in the MIHAN region. The study aims to understand the extent of AI adoption in HR processes and identify the key enablers and inhibitors influencing its implementation. Among the surveyed companies, 9 have incorporated AI-based tools into their HR functions, while the remaining 11 continue to depend on traditional, manually driven systems. This variation offers a balanced perspective on the state of digital maturity among IT firms in the region. The organizations utilizing AI reported the deployment of technologies such as intelligent chatbots, virtual HR assistants, AI-powered recruitment systems, and analytics dashboards [3-5].

These solutions are used for handling employee queries, automating hiring workflows, streamlining onboarding, and generating predictive insights for workforce planning. Prominent companies such as TCS, Infosys, Tech Mahindra, and Hexaware have already implemented these innovations to enhance HR productivity and elevate employee experience. Conversely, companies yet to embrace AI pointed to several challenges, including high implementation costs, lack of in-house technical expertise, limited awareness about AI's advantages, and resistance to change. These firms primarily rely on manual methods, including email communication, physical documentation, and spreadsheets, reflecting a gap in digital transformation even within technologically advancing zones like MIHAN. By examining both AI adopters and non-adopters, this study offers a comprehensive understanding of how AI is shaping HRM at a regional level. The insights derived aim to support HR leaders, technology vendors, and policymakers in identifying practical strategies to drive AI adoption and modernize workforce management across India's tier-2 IT hubs [6].

2. Data Collection & Analysis

This research explores how Artificial Intelligence (AI) tools are being utilized within the Human Resource (HR) departments of 20 IT firms located in the MIHAN region of Nagpur [7]. Primary data was gathered through structured telephonic interviews conducted with HR professionals from each organization. The main aim of the study was to distinguish between companies that have integrated AI into HR functions—such as talent acquisition, employee engagement, and performance monitoring—and those that continue to operate through traditional, manual HR processes. The following table presents a concise overview of the results obtained from these interactions. The table-1 summarizes the findings [8].

Table 1 Comparative Analysis of AI Tool Usage in HR by MIHAN IT Companies

S. No.	Company Name	AI Tools in HR Operations	AI Usage
1	TCS – Nagpur	Utilizes smart assistant 'Cara', AI-supported HR interface, digital coaching for interviews, and intelligent workflow tools	Adopted
2	HCL – Nagpur	Implements DRYiCE solutions, auto HR routines via iAutomate, IntelliOps, and virtual HR bot "Lucy"	Adopted
3	Hexaware Technologies	Leverages Tensai AI for HR, GPT-enabled recruitment, intelligent onboarding, and upskilling tools via upGrad	Adopted
4	Infosys – MIHAN Nagpur	Employs Oracle's virtual HR assistant, Cortex analytics suite, and in-house bots including NaVi and Zoe	Adopted
5	GlobalLogic – Nagpur	Uses automated resume tools, generative bots for query handling, robotic workflows, and immersive onboarding via VR	Adopted
6	Tech Mahindra	Integrates UVO for communication, K2 robot assistant, digital hiring, and Yellow.ai for process automation	Adopted
7	Infocepts – Nagpur	Deploys Employee360 suite, Decision360, AI Copilot, and hybrid decision-making support systems	Adopted

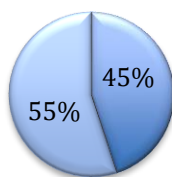| 8	KloudData Labs Pvt. Ltd.	Applies Workato automation, cognitive chat interfaces, and intelligent HR workflows	Adopted
9	Sagacious IP Pvt. Ltd.	Engages Power BI dashboards, SharePoint-driven HR data systems, Power Apps for PMS, and ML-enhanced internal tools	Adopted
10	Zeta Softech Pvt. Ltd.	No AI solutions reported	Not Adopted
11	ADCC Infocad Ltd. (Infocom)	No AI solutions reported	Not Adopted
12	smartData Enterprises (India) Ltd.	No AI solutions reported	Not Adopted
13	Altius Customer Services Pvt. Ltd.	No AI solutions reported	Not Adopted
14	Lighthouse Info Systems Pvt. Ltd.	No AI solutions reported	Not Adopted
15	IT Shastra (India) Pvt. Ltd.	No AI solutions reported	Not Adopted
16	Cloud Science Labs Pvt. Ltd.	No AI solutions reported	Not Adopted
17	People Global Services Pvt. Ltd.	No AI solutions reported	Not Adopted
18	Perla IT Solutions Pvt. Ltd.	No AI solutions reported	Not Adopted
19	Blue Planet Infosolutions Pvt. Ltd.	No AI solutions reported	Not Adopted
20	Virtual Galaxy Infotech Ltd.	No AI solutions reported	Not Adopted

Figure 1 AI Adoption in HR: Insights from MIHAN IT Companies

2.1. Interpretation of Findings

The study reveals that **55%** of IT companies in the MIHAN region have not adopted AI tools in their HR departments**,** while only **45%** have integrated such tools into their HR practices. This indicates that more than half of the companies continue to rely on non-automated l HR systems (Figure 1).

3. Results and Discussion

3.1. Results

The research focused on the extent of Artificial Intelligence (AI) adoption in Human Resource (HR) functions across 20 IT firms located in the MIHAN region of Nagpur [9-11]. Through telephonic interviews with HR personnel, it was found that 45% (9 out of 20) of the companies have embraced AI tools within their HR operations, whereas the remaining 55% (11 out of 20) have yet to adopt such

technologies. Among the adopters, tools like virtual assistants, AI chatbots, automated hiring systems, and performance analytics platforms were commonly implemented [12]. These solutions were primarily utilized to streamline recruitment, respond to employee inquiries, enhance onboarding, and support performance assessments. On the other hand, the non-adopting firms pointed to challenges such as financial limitations, insufficient technical skills, and a continued reliance on conventional HR processes. This disparity highlights a clear digital divide in AI usage within the MIHAN IT cluster, underscoring both the ongoing technological advancement and the need for greater awareness and support to foster widespread AI integration in HR practices.

3.2. Discussion

The study highlights a notable gap in the adoption of AI technologies within HR departments of IT companies located in the MIHAN region. This disparity reflects deeper issues related to organizational readiness and openness to digital transformation [13]. Despite operating within a fast-developing IT hub, fewer than half of the surveyed companies have integrated AI tools into their HR functions, suggesting that barriers extend beyond just the availability of advanced technologies. A central takeaway is that the adoption of AI in HR is influenced more by internal factors such as leadership attitude, perceived return on investment, and organizational mindset than by access to technology alone [14]. The companies that have implemented AI solutions often treat HR as a key strategic area, emphasizing data-informed decisions, process efficiency, and improved employee engagement. For these firms, investing in AI serves not only to automate routine tasks but also to unlock valuable insights and support scalable, agile HR operations [15].

Conclusion

The findings of the study reveal a distinct gap in the use of AI tools within HR departments among IT companies in the MIHAN region. While certain organizations have adopted AI to streamline operations and improve workforce management, others continue to depend on manual processes due to challenges such as cost, limited awareness, or resistance to change. This disparity underscores the importance of increasing awareness, aligning technology adoption with organizational strategy, and introducing supportive measures to encourage widespread AI implementation. Strengthening these areas can accelerate digital transformation and enhance HR practices across the region.

References

[1]. Budi Susilo, Y. K., & Noordin, N. (2025). Artificial Intelligence in Human Resource Management: A Bibliometric Analysis of Case Studies on Implementation Trends and Practices. SSRN Electronic Journal. doi: 10.2139/ssrn.5137725.

[2]. Venugopal, M., Pillai, V. M., Prasad, R., & Raman, R. (2024). Transformative AI in Human Resource Management: Enhancing Workforce Planning with Topic Modeling. Cogent Business & Management, 11(1), Article 2432550. doi: 10.1080/23311975.2024.2432550.

[3]. Mwita, K. M., & Kitole, F. A. (2025). Potential Benefits and Challenges of Artificial Intelligence in Human Resource Management in Public Institutions. Discover Global Society, 3, Article 35. doi: 10.1007/s44282-025-00175-8.

[4]. Aydin, O., Karaarslan, E., & Narin, N. G. (2024). Artificial Intelligence, VR, AR and Metaverse Technologies for Human Resources Management. arXiv. doi: 10.48550/arXiv.2406.15383.

[5]. Deepa, R., Sekar, S., Malik, A., & Attri, R. (2024). Impact of AI-focused Technologies on Social and Technical Competencies for

HR Managers – A Systematic Review and Research Agenda. Technological Forecasting and Social Change, (May 2024). doi: 10.1080/23311975.2024.2432550.

[6]. Kapoor, A., & Singh, R. (2023). AI-based Recruitment Systems: Impact on Hiring Effectiveness in IT Sector. International Journal of Human Capital and Information Technology Professionals, 14(2), 55–70. doi: 10.4018/IJHCITP.20230401.oa4.

[7]. Zhang, T., Li, M., & Chen, Y. (2023). Machine Learning Approaches in Human Resource Management: A Review and Future Directions. Journal of Business Research, 159, 113673. doi: 10.1016/j.jbusres.2023.113673.

[8]. Sharma, P., & Mehta, R. (2022). The Role of Artificial Intelligence in Strategic Human Resource Management: A Comparative Study. International Journal of Emerging Technologies and Innovative Research, 9(10), 501–507.

[9]. Al-Jabri, I. M., & Sohail, M. S. (2022). The Influence of AI Adoption on HR Analytics Capabilities: Evidence from Technology Firms. Technological Forecasting and Social Change, 180, 121693. doi: 10.1016/j.techfore.2022.121693.

[10]. Deshpande, S., & Kamat, V. (2022). Enhancing HR Functions with AI-Powered Chatbots: Insights from Indian IT Sector. Global Journal of Flexible Systems Management, 23(1), 45–58. doi: 10.1007/s40171-021-00266-4.

[11]. El Ouirdi, M., Segers, J., El Ouirdi, A., & Pais, I. (2021). The Power of Artificial Intelligence in HRM: A Systematic Literature Review. Employee Relations, 43(6), 1283–1303. doi: 10.1108/ER-04-2020-0174.

[12]. Shukla, P., & Agarwal, R. (2021). AI Integration in Performance Appraisal: A Case-Based Exploration. Indian Journal of Industrial Relations, 57(1), 89–101.

[13]. Brougham, D., & Haar, J. M. (2020). Smart Technology, Artificial Intelligence, Robotics, and Algorithms (STARA): Employees' Perceptions of Our Future Workplace. Journal of Management & Organization, 26(2), 157–175. doi: 10.1017/jmo.2018.50.

[14]. Upadhyay, A. K., & Khandelwal, K. (2020). Applying Artificial Intelligence: Implications for Recruitment. Strategic HR Review, 19(5), 213–215. doi: 10.1108/SHR-07-2020-0063.

[15]. Jain, R., & Singh, S. (2020). Human Resource Analytics and Artificial Intelligence: Transforming HR Functions in India. Journal of Management Research and Analysis, 7(2), 67–73.